Peaceful Nuclear Cooperation

U.S. Support for NPT Article IV

UNITED STATES & ARMENIA

Through the International Atomic Energy Agency (IAEA), the United States contributes to the work of many countries using nuclear materials and technology for peaceful purposes. In recent years, U.S. support has focused on achieving tangible and lasting benefits in fields that are vital to human development, including agriculture, human health, water resource management, and human resource development. Since 2000, the IAEA has approved and funded $7,410,998, including $487,729 in 2013, under its Technical Cooperation (TC) program for projects in Armenia.

In addition to the United States' longstanding support for the IAEA's activities to promote peaceful nuclear applications, at the 2010 NPT Review Conference, the United States announced a $100 million USD effort to expand this support over the next five years. The United States has pledged $50 million towards the IAEA's Peaceful Uses Initiative (PUI), focusing on human health, food security, water resource management, and nuclear power infrastructure development.

The United States views its support for peaceful uses of nuclear energy, to which all NPT Parties are entitled, as a critical part of its broader effort to strengthen the IAEA and the global nuclear nonproliferation regime. The U.S. has already designated over $22 million for IAEA projects benefitting over 120 countries, including Armenia, for which funding was previously unavailable. The United States is working with partners to reach the $100 million goal, and welcomes commitments of over $12 million from Japan, the Republic of Korea, New Zealand, the Czech Republic, Hungary, Sweden, Australia, France, Indonesia, Brazil, Italy, the UK and Kazakhstan.

NUCLEAR ENERGY

Due to increases in fossil fuel prices, concerns about secure supply and an increasing awareness of the importance of greenhouse gas reductions, several countries are considering expanding their nuclear power programs or introducing nuclear energy for the first time. This requires careful planning, preparation and investment in a sustainable infrastructure to provide the legal, regulatory, technological, and human resources necessary. Armenia is therefore participating in a regional TC project sponsored by the United States to strengthen national and regional infrastructures for the planning and development of nuclear power programs. The project will ensure that any Member State planning the introduction or expansion of nuclear energy has a complete understanding of the range of issues and activities to be addressed before implementation of a nuclear power project.

AGRICULTURE

In parts of the Balkans and the Eastern Mediterranean, the Mediterranean fruit fly causes major damage to fruit and vegetable production by reducing fruit production, increasing insecticide use, and therefore directly impacting the production cost of agricultural commodities. Moreover, it causes problems in international fruit and vegetables trade due to quarantine regulations imposed by some countries, and maximum insecticide residue limits allowed by others.

Armenia is working through a regional TC project sponsored by the United States to enhance agricultural productivity in the Balkans and Eastern Mediterranean by supporting fruit fly pest prevention and management. This will be accomplished through sharing technical knowledge and providing support to selected fruit fly suppression programs in which the use of the sterile insect technique (SIT), as part of an area-wide integrated management approach, has already proven to be technically and economically feasible.

NUCLEAR SAFETY

Disused facilities and sites contaminated because of activities involving the use of radioactive

1. *Nuclear power plant under construction. Credit: IAEA*
2. *Exploring ways to secure radioactive waste for generations to come. Credit: Comet*
3. *Damaged apples infested with fruit flies. Credit: Louise Potterton/IAEA*

material exist worldwide and many pose continuing health risks to adjacent communities and, potentially, to the wider public. Armenia is currently participating in an interregional TC project sponsored by the United States that will provide support and assistance toward the efficient clean-up of radioactive contaminated facilities and sites. Throughout this project, barriers to the acceptance of continued or expanded applications of peaceful uses of nuclear technology can, to some extent, be removed.

Armenia is also participating in several regional TC projects through which Member States will improve their comprehensive regulatory infrastructure for the safety and control of radiation sources, establish and develop adequate and effective regulatory mechanisms, and harmonize and streamline national capabilities for regulatory control in full compliance with the IAEA Safety Standards and international requirements.

HUMAN HEALTH

One of the greatest challenges developing countries face in fighting cancer is devising plans for building cancer control capacity. Through the IAEA's Programme of Action for Cancer Therapy (PACT), the IAEA has conducted imPACT reviews with funding contributions from the United States in 18 countries, including Armenia. These reviews evaluate the country's readiness to implement cancer control programs, assess the national cancer burden, and provide recommendations on developing the country's cancer control capacity.

HUMAN RESOURCES

To contribute to Member States' manpower development, the IAEA awards individual fellowships and organizes group training courses. Every year, numerous fellows and training course participants travel to the United States for training in various peaceful uses of nuclear technology and return to their home country to apply the lessons learned.

Since 2000, the United States has hosted multiple training courses that included Armenian participants in fields such as fuel storage and waste management, nuclear safety and security, nuclear decommissioning, and expanding nuclear power programs. Training was also provided through the IAEA Fellowship Program to 10 Armenians, three of which were sponsored by the United States, in the fields of power reactors; nuclear and radiation safety and security; safety standards, regulations, and procedures; safety assessment of nuclear facilities; and regulatory infrastructure for nuclear and radiation safety.

Additionally, since 2000, 24 U.S. experts have traveled to Armenia to collaborate through various IAEA Technical Cooperation projects. Examples of some topics include safety reviews, seismic walk downs, decommissioning, human resource development, and knowledge risk assessment.

1. *Metal seals show evidence of any unauthorized attempts to access secure material. Credit: Dean Calma/IAEA*
2. *IAEA fellows receive training in plant breeding. Credit: Dean Calma/IAEA*

Through bilateral efforts, the United States has provided direct support to Member States through various collaborative projects such as the exchange of information, expert visits, and training of personnel.

Beginning in 2010, the International Nuclear Safeguards Engagement Program (INSEP) has collaborated with Armenia regarding its State System of Accounting and Control (SSAC) and non-destructive assay (NDA) through equipment transfer and training. In addition, a protocol was implemented to update the safeguards systems and procedures at the State Authority and nuclear power plant. For these purposes the U.S. Department of Energy's National Nuclear Security Administration provided $200,000 in 2010 and an additional $172,000 in 2012.

In 2003, the Armenian Nuclear Regulatory Authority (ANRA) signed a cooperative agreement with the U.S. Nuclear Regulatory Commission (NRC) in areas including thermal-hydraulic code applications. Additionally, there is currently a cooperative agreement between the NRC and ANRA for the exchange of technical information and cooperation in nuclear safety matters.